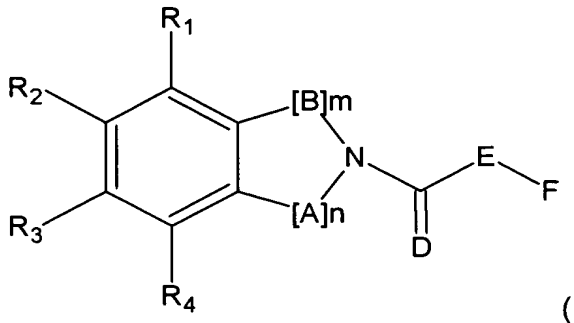
CLAIMS

1. A compound of the general formula (I) or a pharmaceutically acceptable acid addition salt thereof:



(I)

wherein

R_1-R_4 are, independent of each other H; C_1-C_6 alkyl; halogen; NR_5R_6, wherein R_5 and R_6 are, independent of each other, H, C_1-C_6 alkyl, C_2-C_6 acyl; OR_7, wherein R_7 is H, C_1-C_6 alkyl or C_2-C_6 acyl; CN; COR_8, wherein R_8 is H, C_1-C_6 alkyl or C_1-C_6 alkoxy;

A is CHR_9, wherein R_9 is H, C_1-C_6 alkyl;

n is 1-3;

B is CHR_{10}, wherein R_{10} is H, C_1-C_6 alkyl;

m is 1 or 2;

D is O or S or optionally NR_{16}, wherein R_{16} is H, C_1-C_6 alkyl or C_2-C_6 acyl ;

E is $CR_{11}R_{12}$ or NR_{13}, wherein R_{11} and R_{12} are, independent of each other, H or C_1-C_6 alkyl and wherein R_{13} is H or C_1-C_6 alkyl;

F is C_1-C_{18} alkyl, which is optionally mono- or di-unsaturated and is optionally substituted by alkyl, aryl, substituted aryl, heteroaryl, substituted heteroaryl, wherein, independent of each other, said C_1-C_{18} alkyl and optional substitutents are optionally further substituted by one to three substituents independently selected from F, Cl, and Br;

with the proviso that,

if R_1 and R_2 are H, n is 2, m is 1, D is S, E is NH, F is 2-(4-chlorophenyl)ethyl or octyl, R_3 and R_4 are not both OH or OH and OCH_3;
if R_1 and R_4 are H, n is 2 or 3, m is 1, D is S, E is NH, F is 2-(4-chlorophenyl)ethyl or octyl, R_2 and R_3 are not both OH or OH and OCH_3.

2. The compound of claim 1, wherein R_9 and R_{10} are H.

3. The compound of claim 1, wherein at least one of R_{11}, R_{12} and R_{13} is H.

4. The compound of claim 1, wherein R_{11} and R_{13} are H

5. The compound of claim 4, wherein R_9 and R_{10} are H.

6. The compound of claim 5, wherein R_{12} is H.

7. The compound of claim 1, wherein F is ω-(C_1-C_3)R_{14}, wherein R_{14} is substituted or unsubstituted aryl or heteroaryl.

8. The compound of claim 7, wherein R_{14} is mono-, di- or trisubstituted aryl or mono-, di- or trisubstituted heteroaryl, wherein said mono-, di- or trisubstitution is C_1-C_6 alkyl; aryl; heteroaryl; halogen; hydroxy, C_1-C_3 alkoxy; methylenedioxy; nitro; cyano; carboxy C_1-C_6 alkyl; $R_{15}CO$, wherein R_{15} is H, C_1-C_6 alkyl, aryl; amino; alkylamino, dialkylamino; fully or partially fluorinated C_1-C_6 alkyl; with the proviso that, in case of di- or trisubstitution, the substituents are same or different.

9. The compound of claim 8, wherein at least one substituent in said mono-, di- or trisubstitution is selected from C_1-C_6 alkyl, aryl, F, Cl, Br, methyl, trifluoromethyl, nitro, and methoxy.

10. The compound of claim 8, wherein at least two substituents in said mono, di- or trisubstitution are selected from C_1-C_6 alkyl, aryl, F, Cl, Br, methyl, trifluoromethyl, nitro, and methoxy.

11. The compound of claim 1, wherein at least one of R_1-R_4 is halogen.

12. The compound of claim 11, wherein said halogen is chloro or bromo.

13. The compound of claim 11, wherein at least one of R_1-R_4 is hydroxy or methoxy.

14. The compound of claim 1, wherein at least one of R_1 and R_4 is halogen.

15. The compound of claim 14, wherein said halogen is chloro.

16. The compound of claim 1, wherein at least two of R_1-R_4 are halogen.

17. The compound of claim 16, wherein each of said halogens is independently chloro or bromo.

18. The compound of claim 16, wherein said halogen is chloro.

19. The compound of claim 16, wherein at least one of R_1 and R_4 is halogen.

20. The compound of claim 16, wherein at least one of R_1-R_4 is hydroxy or methoxy.

21. The compound of claim 20, wherein two of R_1-R_4 are, independent of each other, hydroxy or methoxy or methylenedioxy.

22. The compound of claim 1, wherein at least one of R_1 to R_4 are, independent of each other, hydroxy or methoxy or methylenedioxy.

23. The compound of claim 1, wherein at least two of R_1-R_4 are hydroxy.

24. The compound of claim 22, wherein said two hydroxy groups are in an ortho relationship to thereby form a pyrocatechol structure.

25. The compound of claim 24, wherein two of R_1-R_4 are methyl to thereby form said pyrocatechol structure which is dimethylated.

26. The compound of claim 24, wherein one of R_1 to R_4 is hydroxy and another is methoxy.

27. The compound of claim 26, wherein said hydroxy and methoxy are in an ortho relationship.

28. The compound of claim 1, wherein at least one of R_1 to R_4 is hydroxy or methoxy and at least another of R_1 to R_4 is chloro or bromo,.

29. The compound of claim 28, wherein said at least another of R_1 to R_4 is chloro.

30. The compound of claim 28, wherein said hydroxy or methoxy and said chloro or bromo are in an ortho relationship.

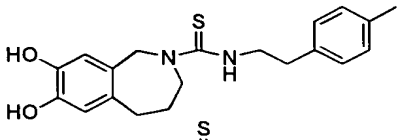
31. The compound of claim 1, wherein at least two of R_1 to R_4 are methoxy or comprised by methylenedioxy.

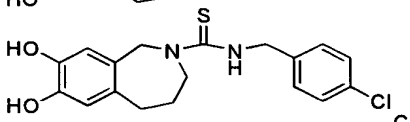
32. The compound of claim 1, wherein D is O.

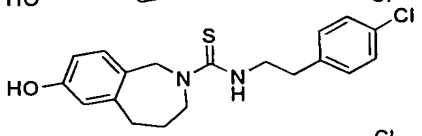
33. The compound of claim 1, wherein D is S.

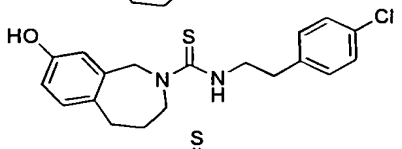
34. The compound of claim 1, in form of a pharmaceutically acceptable acid addition salt.

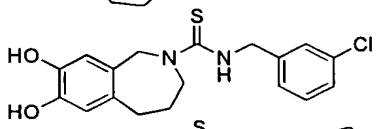
35. The compound of claim 1 selected from the group consisting of:

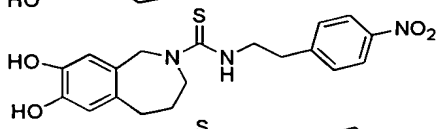
Res-1-84 

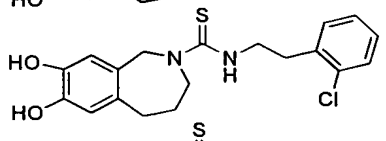
Res-1-86 

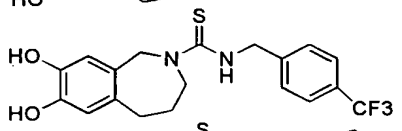
Res-2-75 

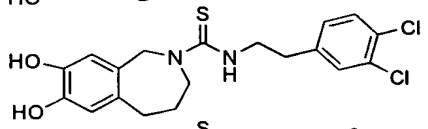
Res-2-83 

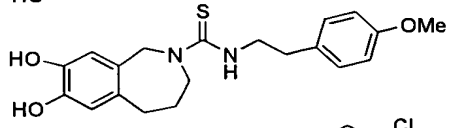
Res-3-5 

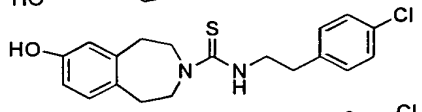
Res-3-6 

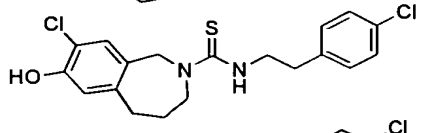
Res-3-15 

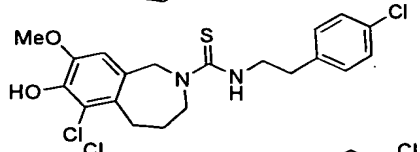
Res-3-22 

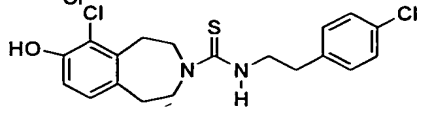
Res-3-29 

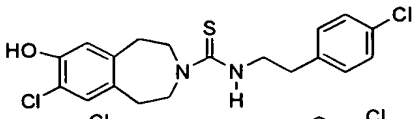
Res-3-31 

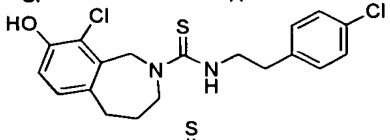
Res-3-73 

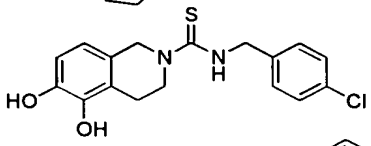
Res-5-19 

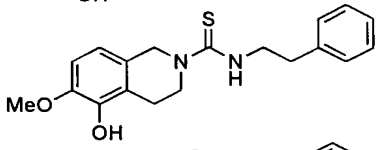
Res-5-33A 

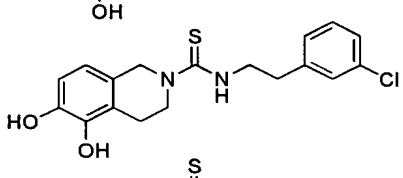
Res-5-48B 

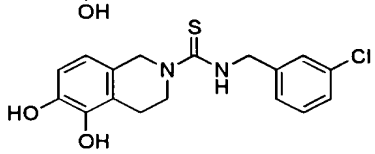
Res-5-48C 

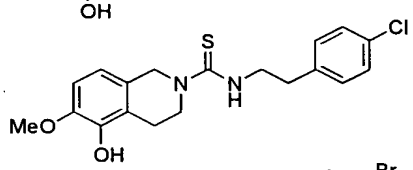
Res-5-60B 

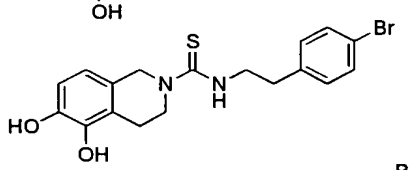
Res-1-67 

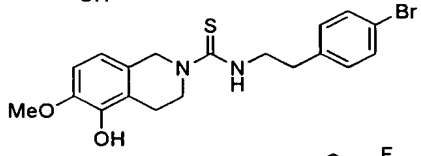
Res-2-5by 

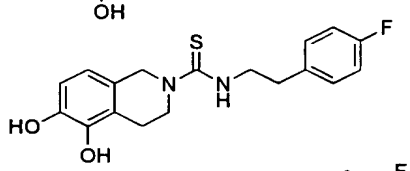
Res-2-7 

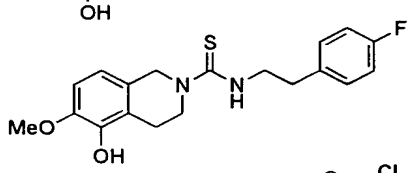
Res-2-13 

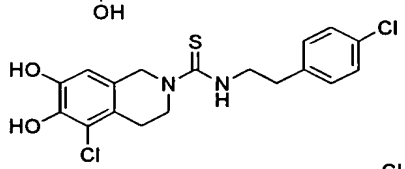
Res-2-29by 

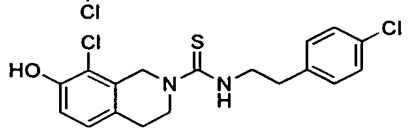
Res-2-31 

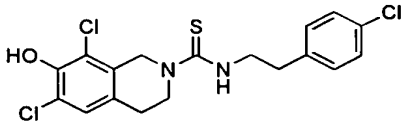
Res-2-31by 

Res-2-43 

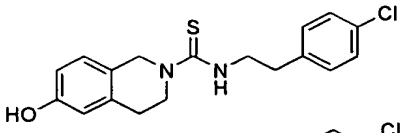
Res-2-43by 

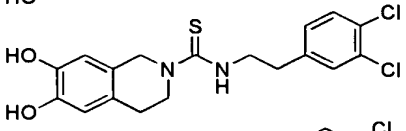
Res-4-11 

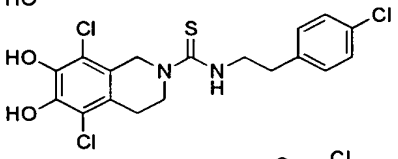
Res-4-77-1 

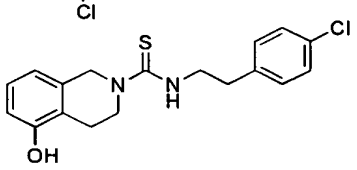
Res-4-93 

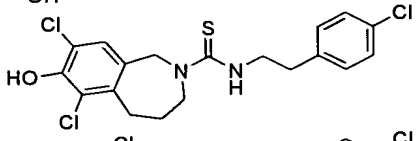
36. The compound of claim 1 selected from the group consisting of:

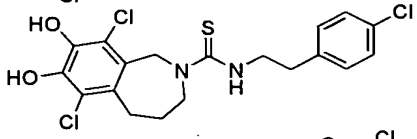
Res-4-33 

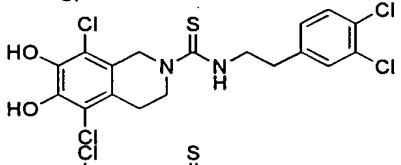
Res-4-81 

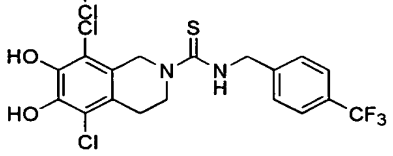
Res-4-95 

Res-5-7 

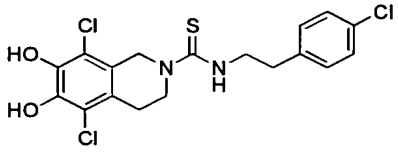
Res-5-21 

Res-5-32 

Res-6-25 

Res-6-27 

37. A compound according to claim 1 which is

Res-4-95 

38. A pharmaceutical composition comprising an effective bronchoconstriction relaxing dose of a compound of claim 37 and a pharmaceutically acceptable carrier.

39. A pharmaceutical composition comprising an effective bronchoconstriction relaxing dose of a compound of claim 36 and a pharmaceutically acceptable carrier.

40. A pharmaceutical composition comprising an effective bronchoconstriction relaxing dose of a compound of claim 35 and a pharmaceutically acceptable carrier.

41. A pharmaceutical composition comprising an effective bronchoconstriction relaxing dose of a compound of claim 1 and a pharmaceutically acceptable carrier.

42. A method of treating or preventing pulmonary disease characterized by bronchoconstriction, comprising the administration to a person of a bronchoconstriction relaxing dose of the compound of claim 1.

43. The method of claim 39, wherein the disease is asthma, chronic obstructive pulmonary disease, bronchiectasis, cystic fibrosis, bronchiolitis or bronchopulmonary dysplasia.

44. A method of treating or preventing pulmonary disease characterized by bronchoconstriction, comprising the administration to a person of a bronchoconstriction relaxing dose of the compound of claim 35.

45. A method of treating or preventing pulmonary disease characterized by bronchoconstriction, comprising the administration to a person of a bronchoconstriction relaxing dose of the compound of claim 36.

46. A method of treating or preventing pulmonary disease characterized by bronchoconstriction, comprising the administration to a person of a bronchoconstriction relaxing dose of the compound of claim 37.